

Practical / tabletop task

Monitoring vital signs



Dog normal heart rate **60 – 140 beats per minute**

Dog normal respiratory rate: **10 – 30 breaths per minute**

Dog normal temperature range: **38 – 39.2° Celsius**

Practical / tabletop task

Monitoring vital signs



Cat normal heart rate: **110 – 180 beats per minute**

Dog normal respiratory rate: **20 – 30 breaths per minute**

Dog normal temperature range: **38 – 38.5° Celsius**

Other vital signs we can measure and monitor:

Pulse, blood pressure, gum colour and capillary refill time.

Let's practise taking heart and respiratory rates!

You will need: a stethoscope (or use pulse) and a watch/clock with a second hand, or a timer

Adult human normal heart rate = 60 – 100 beats per minute

Adult human normal respiratory rate = 12 – 20 breaths per minute

How we count the heart rate

Use a stethoscope or feel for pulse.

Count the beats in 15 seconds. Multiply the total by 4

The total will give you the beats per minute.

OR

Count the beats in 30 seconds. Multiply the total by 2

The total will give you the beats per minute

How we count the respiratory rate

Watch the rise and fall of the chest.

Count the breaths in 15 seconds. Multiply the total by 4

The total will give you the breaths per minute

OR

Count the breaths in 30 seconds. Multiply the total by 2

The total will give you the breaths per minute

Ambassador notes

Tailor this task to the age-group you are delivering the session to.

For younger age-groups this may need to be simple – listening to the heart, feeling for the pulse, and watching for breaths. For older groups you may be able to get them to calculate heart and respiratory rates using the different methods and have a more in-depth discussion on the related topics.

Activities

You can put your group into pairs and get them to take each other's heart and respiratory rates, write them down and report back to the group.

You can talk about why this can vary between people (but not as much as in animals!)

Discussion topics

These topics should be tailored to the age-group delivered to and their progress with the lesson.

What are 'vital signs'? What do they tell us about?

When do veterinary nurses (and veterinary surgeons) need to measure and monitor vital signs?

How do we take an animal's temperature?

What can we use to take an animal's heart rate?

How do we take an animal's respiratory rate?
(Awake and when under anaesthetic, when panting for example)

When might heart rate be increased? Decreased?

When might respiratory rate be increased? Decreased?

How do you think the heart rate of a Chihuahua (tiny dog) compares to that of a giant dog (Great Dane)?

Guess the normal heart rate of a mouse!
(500-700 bpm, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4965177/>)

What does the pulse tell us? Where can we measure this?

How do we measure blood pressure? (advanced)

What do gum/mucous membrane colour and CRT tell us? (advanced)
